## **Technical Data Sheet**

# PE-CF594 Mouse Anti-Human ILT7 (CD85g)

### **Product Information**

Material Number:	562557
Alternate Name:	LILRA4; CD85g; ILT7; ILT-7; Immunoglobulin-like transcript 7
Size:	50 tests
Vol. per Test:	5 μl
Clone:	17G10.2 (also known as 17.2)
Immunogen:	ILT7–FcεRIγ-transfected 2B4 cells
Isotype:	Mouse IgG1, ĸ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

### Description

The 17G10.2 monoclonal antibody specifically binds to human Immunoglobulin Like Transcript 7 (ILT7), also known as CD85g. The ILT7 protein is encoded by the *LILRA4* (Leukocyte Immunoglobulin Like Receptor subfamily A member 4) gene. ILT7 is a member of immunoglobulin-like transcripts (ILT) or leukocyte immunoglobulin-like receptor (LIR) gene family. ILT7 is selectively expressed on plasmacytoid dendrtic cells (pDC) but not on myeloid dendritic cells or other peripheral blood leukocytes. In response to IL-3, IL-3 receptor complex signaling downregulates ILT7 expression by pDC. ILT7 associates with the FccRIγ signal adapter protein to form a receptor complex that can signal through activation of an immunoreceptor-based tyrosine activation motif (ITAM)-mediated signaling pathway. Signaling through the ILT7-FccRIγ receptor complex negatively regulates the innate immune functions of pDC. ILT7 crosslinking inhibits TLR responses by pDC such as the stimulated production of type I interferon and other cytokines. Bone marrow stromal cell antigen 2 (BST2) has been identified as a biological ligand for ILT7.

This antibody is conjugated to BD Horizon<sup>TM</sup> PE-CF594, which has been developed exclusively by BD Biosciences as a better alternative to PE-Texas Red<sup>®</sup>. PE-CF594 excites and emits at similar wavelengths to PE-Texas Red<sup>®</sup> yet exhibits improved brightness and spectral characteristics. Due to PE having maximal absorption peaks at 496 nm and 564 nm, PE-CF594 can be excited by the blue (488-nm), green (532-nm) and yellow-green (561-nm) lasers and can be detected with the same filter set as PE-Texas Red<sup>®</sup> (eg 610/20-nm filter).



Multicolor flow cytometric analysis of ILT7 expressed on human peripheral blood cells. Human peripheral blood mononuclear cells were stained with FITC Lineage Cocktail 1 (lin 1) (Cat. No. 340546), PerCP-Cy<sup>™</sup>5.5 Mouse Anti-Human CD123 antibody (Cat. No. 558714/560904) and either BD Horizon<sup>™</sup> PE-CF594 Mouse IgG1, κ Isotype Control (Cat. No. 562292; Left Panel) or BD Horizon<sup>™</sup> PE-CF594 Mouse Anti-Human ILT7 (CD85g) (Cat. No. 562557; Right Panel). Two-color flow cytometric dot plots show the correlated expression patterns of CD123 versus ILT7 (or Ig Isotype control) for Lin-1 negative-gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometric analysis was performed using a BD<sup>™</sup> LSR II Flow Cytometer System.

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## Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The antibody was conjugated with BD Horizon™ PE-CF594 under optimum conditions, and unconjugated antibody and free PE-CF594

#### were removed. **Application Notes**

## Application

Application	

Flow cytometry	Routinely	Tested		
Suggested Compa	nion Products			
Catalog Number	Name	Size	Clone	
554656	Stain Buffer (FBS)	500 ml	(none)	
562292	PE-CF594 Mouse IgG1, κ Isotype Control	0.1 mg	X40	
558714	PerCP-Cy <sup>™</sup> 5.5 Mouse anti-Human CD123	100 tests	7G3	
560904	PerCP-Cy <sup>™</sup> 5.5 Mouse Anti-Human CD123	25 tests	7G3	

#### **Product Notices**

- This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^{-6}$  cells in a 100-µl experimental 1. sample (a test).
- Source of all serum proteins is from USDA inspected abattoirs located in the United States. 2
- 3. An isotype control should be used at the same concentration as the antibody of interest.
- 4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem 5. fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 6. discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
- 8. Texas Red is a registered trademark of Molecular Probes, Inc., Eugene, OR.
- CF<sup>™</sup> is a trademark of Biotium, Inc. 9.
- When excited by the yellow-green (561-nm) laser, the fluorescence may be brighter than when excited by the blue (488-nm) laser. 10.
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- 12. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using multi-laser cytometers, which may directly excite both PE and CF™594.

#### References

Cao W, Bover L. Signaling and ligand interaction of ILT7: receptor-mediated regulatory mechanisms for plasmacytoid dendritic cells. Immunol Rev. 2010; 234(1):163-176. (Clone-specific: Inhibition)

Cao W, Bover L, Cho M, et al. Regulation of TLR7/9 responses in plasmacytoid dendritic cells by BST2 and ILT7 receptor interaction. J Exp Med. 2009; 206(7):1603-1614. (Clone-specific: Activation, Calcium Flux, Flow cytometry, Inhibition)

Cao W, Rosen DB, Ito T, et al. Plasmacytoid dendritic cell-specific receptor ILT7-Fc epsilonRI gamma inhibits Toll-like receptor-induced interferon production. J Exp Med. 2006; 203(6):1399-1405. (Immunogen: Activation, Calcium Flux, Flow cytometry, Functional assay, Inhibition)

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